Project-based Course Overview

coursera.org/learn/create-aws-ec2-autoscaling-group-load-balancer/supplement/MhGNK/project-based-course-overview

Welcome!

Welcome to **Creating an AWS EC2 AutoScaling Group using Load Balancer**. This is a project-based course which should take approximately 2 hours to finish. Before diving into the project, please take a look at the course objectives and structure:

Course Objectives

In this course, we are going to focus on **three** learning objectives:

1. *Create an Amazon Machine Image using an EC2 Instance.*
2. *Create an Application Load Balancer to distribute traffic among the AutoScaling Group EC2 instances.*
3. *Create an AWS EC2 AutoScaling Group which scales in and out based on CPU Utilization.*

By the end of this course, you will be able to create an AWS EC2 AutoScaling Group with a load balancer which can scale in and out your web servers based on the incoming traffic load.

Course Structure

This course is divided into 3 parts:

1. Course Overview: This introductory reading material.
2. **Creating an AWS EC2 AutoScaling Group using Load Balancer:** This is the hands on project that we will work on in Rhyme.
3. Graded Quiz: This is the final assignment that you need to pass in order to finish the course successfully.

Project Structure

The hands on project on **Creating an AWS EC2 AutoScaling Group using Load Balancer** is divided into following tasks:

Task 1:

By the end of this task, you will get introduced to what's AWS AutoScaling and Create an EC2 Instance using your AWS account and login to the instance.

- Introduction to AWS AutoScaling Group.
- Create an EC2 Instance.
- Generate an SSH Key Pair.

Task 2:

By the end of this task, you will deploy a sample application on your EC2 server and create an AMI Image.

- Login to EC2 Server using SSH.
- Deploy Sample Python application on the server.
- Create AMI using the EC2 Instance.

Task 3:

By the end of this task you will Create a Launch Configuration using your AMI Image.

Create a Launch Configuration using the AMI.

Task 4:

By the end of this task, you will Create a Target Group which directs traffic to the AutoScaling Group's EC2 instances.

> Create a Target Group to direct traffic to the AutoScaling Group's EC2 Instances.

Task 5:

By the end of this task, you will Create an Application Load Balancer which can handle HTTP traffic.

> Create an Application Load Balancer to handle HTTP traffic.

Task 6:

By the end of this task, you will Create an Auto Scaling Group with 3 EC2 Instances which can scale in and scale out based on CPU Utilization.

> Create an Auto Scaling Group with 3 EC2 Instances which can scale in and scale out based on CPU Utilization.

Task 7:

By the end of this task, you will Test your Auto Scaling Group by simulating users using a Load Testing software and destroy/delete all the components you created to avoid unnecessary billing.

- Test your Auto Scaling Group by simulating users using a Load Testing software.
- Destroy/delete all the components you created to avoid unnecessary billing.